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A "connected education" would cultivate connections among students, between students and teachers, and between students and their work. Stories of ways of knowing show how pedagogy can create contexts for these connections.

Toward a More Connected Vision of Higher Education

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A few years ago, I visited a class at my college in which the teacher, a philosopher, was trying to guide a group of first-year students through a discussion of the arguments made in Darwin's time for and against the universe having been created by God. When the discussion showed signs of deteriorating into an exchange of personal beliefs, the teacher admonished the students: "Remember, we're not talking about beliefs here. We're talking about arguments for beliefs." I thought to myself, what a wonderful thing for these first-year students to hear. What an important distinction that is—between the reasonableness of an argument and the belief the argument is supporting. I felt proud to be a member of an institution that understood and exemplified the value of detachment, the capacity to stand aside from one's beliefs and look at them objectively.

I continue to honor the capacity for detachment, and I still try to cultivate it in my students. But I have learned that for many women students, even some of the most successful ones, detachment can lead to indifference, even alienation. Rightly or wrongly, they believe that the system demands that they remove themselves from their work. Simone, for instance, says that she can write "good papers," papers teachers like, and "someday," she hopes, she might be able to write papers that she likes, but at the moment, she doesn't like them: "I do it, and I get my grade," she says, "but it hasn't proved anything to me. The problem is that I don't feel terribly strongly about one point of view, but that point of view seems to make more sense. It's easier to write the paper, supporting that point of view than the other one, because there's more to support it. And it's not one of my deep-founded beliefs, but it writes the paper." Simone has learned to distinguish between beliefs and

arguments for beliefs. Her papers contain no beliefs, only arguments. In fact, Simone does not write the paper; "it" writes the paper. Reasons write the paper, and reasons seem unrelated to personal truth.

Stories like Simone's have convinced me that the values, goals, structure, and pedagogical practices of our institutions of higher education are imbalanced. Something goes wrong, at least for women, when we subject them to an education that emphasizes separation and detachment to the virtual exclusion of connection and attachment.

My thoughts on these matters have been formed largely by interviews conducted mainly, though not exclusively, with women, over a number of years. I will draw principally on two studies: first, a longitudinal study done at my own institution, Wellesley College, a liberal arts college for women, with my colleague Claire Zimmerman, in which we interviewed several cohorts of undergraduates annually throughout their four years at the college (Clinchy and Zimmerman, 1982; 1985), and second, a project carried out with three other developmental psychologists, Mary Belenky, Nancy Goldberger, and Jill Tarule, involving interviews with 135 women of varying ages and social and ethnic backgrounds, among them undergraduates and alumnae from a range of educational institutions, including relatively "progressive" colleges and an inner-city community college, as well as Wellesley. This research formed the basis for our book, *Women's Ways of Knowing* (WWK) (Belenky, Clinchy, Goldberger, and Tarule, [1986] 1997). In both studies, we tried to elicit our informants' conceptions of knowledge and truth, and we invited them to give us accounts of their educational experiences. In this chapter, I refer mainly to women, because both of these studies and nearly all of my teaching has focused on women, but I believe that colleges do a disservice to men as well. Although gender is beyond the focus of this article, a discussion of the relation of gender and ways of knowing can be found in Clinchy and Norem, 1998.

Epistemological Positions

In WWK, we described five different perspectives on knowledge that the women we interviewed seemed to hold. Like William Perry (1970), we call these perspectives "positions." The perspectives we've identified are similar to his, although different in some important respects. Most of them will be familiar to anyone who works with college students.

Received Knowing. For the received knower, Truth (spelled with a capital T) is absolute and straightforward, and it lies in the hands of (capital A) Authorities. To illustrate: in one of our studies, we said to our interviewees, "Suppose two people disagree on the interpretation of a poem. How would you decide which one is right?" A sophomore replied, "You'd have to ask the poet. It's his poem." We came to call this perspective "received knowledge" because the knower at this position acts essentially as a receptacle. She cannot create ideas or evaluate them. If Authority fails

to dispense the Truth, she is at a loss. As one student said, "I like it when teachers do the talking, because notes are easy to take. . . . When students talk, you don't know whether it's right or not, and then you don't know whether to write it down."

Subjective Knowing. Subjectivism is in some respects the opposite of received knowledge. For the received knower, truth is utterly objective: "Science," a received knower told us, "is not a creation of the human mind." For subjectivists, truth resides in the heart or the gut: "Whatever feels right is right for me." Responding to our question about the interpretation of a poem, one student said, "I find that when ideas are being tossed around, I'm usually more akin to one than another. I don't know—my opinions are just sort of there." And another said, "Well, with me it's almost more a matter of liking one more than another. I mean, I happen to agree with one or identify with it more." For the subjectivist, truth is almost entirely a creation of the human mind, almost utterly subjective: "Whatever you see in the poem, it's got to be there." Here the external world seems almost to disappear. The words on the page dissolve into a sort of Rorschach inkblot, exerting little constraint on the meaning the reader projects onto the page.

Domain Specificity and Epistemological Preference. This does not mean that students operate out of the same epistemological perspective in all areas of their lives; often they view different parts of the curriculum from different perspectives. For instance, naive undergraduates typically perceive the humanities as largely subjective and mathematics and science as largely objective. A sophomore expressed this worldview: "In science, you can be more objective because someone's already said, you know, 'if you see something that looks like this, well then, it's' whatever it is. . . . You know, if a bacteria looks a certain shape, it's called this. Then they're objective, and you can't do anything about the shape of them." With literature and history, she said, it's different: "You can just twist [them] around to suit yourself."

Epistemological positions operate as learning preferences or styles that guide a student's choice of academic concentration. In a survey distributed as part of the Pathways Project (Rayman and Brett, 1993) at Wellesley, students were asked to respond to the statement "I prefer subject matter with precise answers to subject matter with multiple interpretations." This question discriminated significantly, and more than any other, between students who said upon entering the college that they planned to major in math or science and those who said they planned to major in social sciences or humanities. It discriminated, more than any other question, between students who at the end of the sophomore year stuck with their plan to major in math or science and those who switched to a nonscience major. Here is a student who opts for a major in the humanities: "I don't like science courses because things are just too concrete. I like it when the teacher accepts your opinion as being as valid as his or hers and doesn't try to dictate to you what is the right, correct way to interpret something or to look at something, because there just is not one way to look at things. And one's

entitled to think for [oneself]." And here is one who chooses science: "I take mostly science courses, quantitative courses, 'cause there there's mostly one truth, one right answer. I don't like qualitative courses like philosophy, 'cause they're so ambiguous. Everything's all relative, it's just opinion, and I don't see much use for it."

When I share these comments with colleagues, they are dismayed. Science teachers protest that science is not just a matter of counting and naming things, that it does involve interpretation, and that although science may be more objective than philosophy—there is, after, all, a real world out there—nonetheless, it is a creation of the human mind. And teachers in the humanities protest that although students are of course entitled to think for themselves, they are obligated to *think*, to construct reasonable interpretations, grounded in the text.

Like most of the teachers I respect, I want my students to pay close attention to whatever it is we're studying. I don't want them just to swallow my interpretations of a text or wallow in their own gut reactions to it. I want them to examine ideas closely, whether the ideas originate in a text, a classmate's comment, a teacher's lecture, or their own minds. Students who rely exclusively on the relatively passive modes of Received or subjective knowledge are not really thinking. The received knower's ideas come ready-made from the professor; the subjectivist's opinions are "just there." Neither the received knower nor the subjectivist has any systematic, deliberate procedures for developing new ideas or for testing the validity of ideas. What college seems to do for many students is help them develop such procedures.

Procedural Knowing. Students who have reached the position of procedural knowing no longer believe that they can acquire knowledge or arrive at truth through immediate apprehension. Knowledge does not consist of facts to be stored "as is" or of the static residue of direct experience. Knowledge is a *process*, and it requires work. Although no single "answer" may be "right," all interpretations are not equally valid. Knowing requires the application of procedures for comparing and contrasting and constructing interpretations, and the quality of the knowledge depends on the skill of the knower. In WWK, we identified two broad types of procedures, labeling them "separate" and "connected" knowing.

Separate Knowing. Separate knowing involves critical thinking. It is "critical" in the sense of "discerning," as in the Greek *kritikos*; it also has an adversarial flavor. For example, when I ask my students to consider what other interpretations a scientist might have made of the experimental results the scientist has reported, I am asking them to engage in separate knowing. For an undergraduate we call Jane, separate knowing had become almost a reflex: She said, "As soon as someone tells me his point of view, I immediately start arguing in my head the opposite point of view. When someone is saying something, I can't help turning it upside down." Like many of the students we interviewed, Jane has learned to argue with the person she is reading or listening to. Whether she argues in her head, on paper, or out loud,

she looks for flaws in the object, generating opposing ideas, perhaps conjuring up contradictory evidence. She plays what the writer-teacher Peter Elbow calls the "doubting game" (1973; 1986). The doubting game is very popular in the halls of academe: we use it in our teaching, and we try to teach our students to use it. Some of us seem, like Jane, to have developed an adversarial reflex that operates almost as a compulsion. The literary critic David Bleich, for instance, calls attention to "the habit of adversarial reasoning in scholarly work." In the academy, he says, it is assumed that ideas must "compete" with one another: for example, "To justify new work on a topic, graduate students are trained—some would say 'forced'—to review the literature and say why it is inadequate; new work can only be done if others have 'failed to note' it" (1990, pp. 241–242).

Nancy, another undergraduate, provides an especially clear illustration of this aspect of separate knowing: "I never take anything someone says for granted. I just tend to see the contrary. I like playing devil's advocate, arguing the opposite of what somebody's saying, thinking of exceptions to what the person has said or thinking of a different train of logic." Nancy takes an impersonal stance toward the argument she is examining. The person she is reading or talking with could be anyone. She herself could be anyone. There is no personal relationship between the two. Only the product matters; the person who produced it is irrelevant. We academicians tend to place a high value on impersonality. For example, some of us pride ourselves on "blind grading": we read and evaluate students' papers without knowing who wrote them so as not to let our feelings about the person affect our evaluation of the product. And we try to teach our students to examine the material we are studying with a detached, objective eye. This is indeed a powerful way of knowing, but the students we interviewed taught us that there is another equally powerful way.

Connected Knowing. In the Wellesley study, we asked students to respond to comments like Jane's and Nancy's, illustrating critical thinking, and although some of them agreed with the two women, many did not. Most of the students understood (to borrow a phrase from Perry, 1970) that this was "the way They [the professors] want you to think," and many of them had mastered the procedure, but they preferred a more personal and empathic approach. For example, Priscilla said, "When I have an idea about something, and it differs from the way another person's thinking about it, I'll usually try to look at it from that person's point of view, see how they could say that, why they think they're right, why it makes sense." Now, when you play devil's advocate, you take a position contrary to the other person's, even when you agree with it, even when it seems intuitively right. Priscilla turns this upside down. She allies herself with the other person's position even when she disagrees with it. She is playing what Elbow calls the "believing game" (1973, 1986). Instead of looking for what's wrong with the other person's idea, she looks for why it makes sense, how it might be right, "saying Yes to it" (Elbow, 1986, p. 279).

Notice that Priscilla does not remain aloof from the other person. Connected knowing, like separate knowing, is "objective" in the sense that it too involves the suspension of one's own beliefs (or disbelief). But it is not impersonal or detached. Connected knowers do not operate from a neutral perspective; they adopt the perspective of a particular other: Priscilla tries to get behind the person's eyes, to "look at it from that person's point of view." This is what Elbow means by "believe." And Cecily says, "If you listen to people and listen to what they have to say, maybe you can understand why they feel the way they do. There are reasons. They're not just being irrational. When I read a philosopher, I try to think as the author does. It's hard, but I try not to bias the train of thought with my own impressions. I try to just pretend that I'm the author. I try to really just put myself in that person's place and feel why is it that they believe this way." The person with whom the connected knower empathizes need not be a real and present person. The connected knower takes a personal approach even to an impersonal thing like a philosophical argument, treating the text, as one student put it, "as if it were a friend."

Connected knowers believe that to understand what a person is saying, one must adopt the person's own terms. One must refrain from judgment. In this sense, connected knowing is uncritical. But it is not passive. It is a conscious procedure, requiring deliberation and effort. Cecily says, "I try to just pretend I'm the author." She says, "It's *hard*." But the effort in connected knowing is different from the effort required by separate knowing. In connected knowing, you do not try to impose a structure on the material you are trying to understand. You don't try to master the material or control it or transform it. You allow it to transform you. Elbow says that while the doubting game requires a "combative kind of energy that feels like clenching a muscle . . . the shape of the believing game is waiting, patience, not being in a hurry . . . [a] kind of trying-not-to-try" (1973, pp. 177, 180, 181).

Although connected knowing is uncritical, it is not unthinking. It may involve feeling; it always involves thinking. Connected knowers, like separate knowers, look beneath the surface. Cecily looks for "reasons" behind the other person's view. Priscilla wants to know how the person's position "makes sense," "why they think they're right." But the "reasons" connected knowers attempt to elicit are different from the reasons the separate knower looks for. Cecily does not demand that people support or justify their positions. She asks only that they tell her what in their experience led them to hold such a position. She wants to know the story, not the argument, behind the idea.

Constructed Knowing. We did not mean to imply, in WWK, that connected knowing was "better" than separate knowing. One procedure may be more effective in one context, the other in another. Although individuals may have stylistic predilections in one direction or the other, all students need to develop skill in both modes so that they can deploy whichever is appropriate on a given occasion. We know from research and from common

observation that these procedures are not mutually exclusive; indeed, measures of the two appear to be orthogonal (David, 1999; Galotti, Drebus, and Reimer, 1999; Galotti and others, 1999). Ideally, we might even envision our students achieving a way of knowing that integrates the two procedures into one. In WWK, we called this perspective "constructed knowing." I describe the position more fully elsewhere (Clinchy, in press); here I offer only a brief sketch. Constructivists exhibit a sort of double vision. They use an approach that integrates the "active surrender" of connected knowing with the "mastery and control" of separate knowing. They move easily between the two modes, using each as a corrective to the other. Sara, a family therapist who is aware that she has a proclivity for connection, says, "If I find myself being too much into that close-up stance where I'm completely involved in that person's perspective and maybe lose touch with the professional stance, I need to scramble to get my professional stance back." Sara has evolved an approach that is simultaneously adversarial and empathic: she will "take an oppositional stance," voicing exceptions to a client's interpretations, but she phrases her comments in connected language, "in a way that hopefully isn't argumentative, but sort of like a confused statement." In the WWK sample and in subsequent research, we have found few traditional-aged undergraduates who describe a way of knowing as complex as Sara's, and in fact the development of full-blown constructed knowing may require experience beyond college. It is possible, though, that more undergraduates might achieve the perspective if connected knowing were more fully integrated into the goals and practices of higher education.

Connected Education

A "more connected education" would cultivate connections among students, between students and teachers, and between students and their work. (Clinchy, 1995; 1996; Stanton, 1996). Especially, perhaps, in our most "demanding" institutions, students rarely find the time to form intimate relationships with the material they are studying. One student confided, "I remember last semester getting *really* almost terrified when I was studying for finals, because all of a sudden I got so wrapped up in the material. . . . And I just realized, you know, that it was really exciting to do all this stuff. But if you did that all semester long, you'd go crazy. . . . It seems that you don't have a chance to reflect." In class, too, students need permission to reflect and to develop as well as defend ideas. They need to learn how to enter the perspectives of their classmates so that they can effectively think *with* (as well as *against*) them, increasing their skills in building on others' ideas and serving as midwives to each other's embryonic thoughts. They need teachers who are willing to share the *process* as well as the product of their thinking, teachers who are not afraid to think out loud and change their minds in public, teachers who ask "real questions" that invite students to say what they think rather than demonstrate what they know. Instead of

dismissing students' accounts of personal experience with contempt as "anecdotal evidence," connected teachers treat them as a source of hypotheses, deserving to be nurtured.

Connected education requires more personal methods of assessing students' work: for example, longitudinal analysis of the development of each individual's performance over the course of the term, rather than a system in which students compete with each other and in which performance is measured in terms of an impersonal objective standard. The more separate system is useful for certification of the student's competence, but it is not clear that it serves any useful educational purpose. Indeed, anxiety about this form of evaluation can prevent students from becoming deeply involved in their work: they become outcome-oriented rather than process-oriented (Csikszentmihalyi, Rathunde, and Whalen, 1993); in time they often come to hate the process.

Elbow (1993) argues that teachers can help students form an attachment to their own writing by "saying Yes" to their essays, not by offering empty praise but by finding something genuinely valuable in it and helping the student see its value too. For both students and teachers, he says, attachment facilitates detachment: Teachers and students who find something to like in an essay will be more willing to invest energy in criticizing and revising it. In this more connected context, Simone might move toward constructed knowing. She might learn to write papers that she *and* the teacher liked, papers integrating well-founded arguments with "deep-founded beliefs" written not by "it" but by Simone herself.

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